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Green Watch

Bee-mageddon, Magic Chocolate, and Bad Reporting on Science

Junk science beats real science in newsrooms and in the halls of power

By T. Becket Adams

Summary: *Bad scientists and bad journalists team up to use junk science—scientific claims that are unsupported by the facts—to mislead the public and exploit people's fear. For this, society pays a high price. Pesticides and genetically modified foods get banned for no good reason, which leads to higher prices for food (hurting poor people worst of all). Baseless concerns over vaccination help spread infectious disease. The checks-and-balances that are supposed to protect us from junk science are broken, and there is a critical need for reform.*

Signs of junk science include irrational fears and unrealistic claims.

The next time you read an astonishing news report based on the latest scientific study, and you think, "They can't make this stuff up!"—you should reconsider.

They can, and do, make stuff up.

Last spring, Dr. Johannes Bohannon and a team of German scientists discovered that people on low-carbohydrate diets could lose weight faster if they ate a bar of chocolate every day.

Newsrooms around the world responded eagerly to Bohannon's findings. "Excellent News: Chocolate Can Help You Lose Weight!" declared *Huffington Post India*. The U.K.'s *Daily Mail* blared in a headline, "Pass the Easter Egg! New study reveals that eating chocolate doesn't affect your Body Mass Index... and can even help you LOSE weight!"

In the United States, *Modern Healthcare* advised: "Dieting? Don't forget the chocolate." The report leaped around the world, with news of the sweet discovery spreading from the Internet to print and television. Even Europe's highest-circulation newspaper, *Bild*, got in on the action, publishing a report titled "Slim by Chocolate!"

Journalists and readers looked past the too-good-to-be-true nature of the findings and devoured the story wholesale.

As you may have guessed, Bohannon's research was a hoax.

Chocolate not the key to weight loss

The health study was fabricated; it was a test of the hypothesis that scientists and reporters rarely detect junk science.

No one caught onto the ruse.

"Our point was not that journalists could be tricked by fakers, but rather that scientists themselves in this field and other fields are making the kinds of mistakes that we made on purpose," said Bohannon, a journalist whose real first name is John and who holds a Ph.D. in molecular biology. "This whole area of science has become kind of corrupted by really poor standards between scientists and journalists."

He told the *Washington Examiner* that his interest in the project was rooted in personal experience. His mother

was duped by a scientifically dubious fad diet. No scientists or reporters had questioned the scientific claims made by advocates of the diet, which left his mother's kidneys badly damaged. Bohannon began wondering how many other studies might have escaped proper scrutiny.

How easy is to advance bad science in the marketplace of ideas? A German television reporter named Peter Onneken approached him with a way to find out. "There are smart people out there who are getting fooled by this stuff because they think scientists know what they're doing," he told the *Examiner*.

Operating under a fake organization called the Institute of Diet and Health, Bohannon and his collaborators contacted actual test subjects and performed experiments—but when they reported the results, they purposely falsified some of their data. Omitting crucial details, they crafted clever and convincing, but bogus, press releases, and waited to see how many in the media would notice the discrepancies.

No one did.

Not a single person double-checked his research, he said. No one sought comment from independent experts. No one asked him about possible inaccuracies in his work. "I was kind of shocked at how bad the reporting is," he said. "I didn't realize how bad people who call themselves proper journalists are at covering this beat."

The problem wasn't unique to online publications eager for a few quick clicks, Bohannon said. Reputable publications that employ fact-checkers likewise skimmed over the details of his research. "Right now, there's absolutely no accountability," he said. "The bulls**t is just flooding. And it's flooding out of these media venues and no one gets any push back."

Politics, pesticides and power

There's a very real cost to junk science and bad reporting. Consider the case of Bee-mageddon—the widely reported collapse of the bee population. Pollination by bees is critical to plants and to agriculture, and people came to believe that certain pesticides were responsible for the reduced number of bee colonies, so there was great pressure to ban the chemicals that were associated with the bee population collapse.

In April 2013, the European Commission voted to ban the three main products in a specific class of pesticide known as "neonicotinoids." News media organizations cheered the outlawing of the pesticides as a step in the right direction to save Europe's honeybee population.

Two years later, the E.U. is considering whether to scrap the ban. In salivating over the sensational story of the supposedly deadly chemicals, the press failed to question whether the ban was even necessary in the first place.

The number of hives in Europe has increased since the ban was enacted, but the number of bees is nearly unchanged. Rebecca Randall of the Genetic Literacy Project noted in January:

> Globally, beehive counts have increased by 45 percent in the last 50 years, according to a United Nations report. Neonics are widely used in Australia where there have been no mass bee deaths, and in Western Canada, where bees are thriving. Over the past two winters, bee losses have moderated considerably throughout Europe and beehives have gone up steadily over the past two decades as the use of neonics has risen.

Due to the ban, farmers have seen an increase in insect infestations and a decrease in crop yields.

The ban might not have ever been put into place if reporters had been doing their jobs. They would have asked whether bee numbers were actually declining and whether politics, rather than science, was behind the demand for a ban.

Public support in the European Union for a ban of neonicotinoids began building in January 2013, after extensive media coverage of a European Food Safety Authority report. The findings of the regulatory body's risk assessment of the chemicals, however, were badly misreported.

As is common with lengthy and technical studies, the risk assessment was made available with an accompanying press release. But, as reported by Richard North of the website *EUReferendum*, "The press release, which is all most people would have seen, misrepresented the [European Food Safety Authority] report." The press release claimed that the study found evidence that three chemicals posed risks to bees. For thiamethoxam, this wasn't true. For the other two chemicals, clothianidin and imidacloprid, it was an overstatement.

Further, North said, the release went "far beyond the terms of the report, and indeed the agency's [assigned task]. Its role was supposed to be limited to reviewing the evidence, not to define the acceptability of risks—that was the responsibility of the commission and member states."

Media hardly noticed the problem. Reporters focused more on the press

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release's (false) characterization of the study than on what the document said. The news media also ignored the crucial point that the risk assessment lacked the necessary data to come to a conclusion. (The data that came later undermined a scientific case for a ban.) Critics pointed out that the assessment failed to account for several key studies that exonerated the chemicals in question.

It didn't matter. Journalists rushed to report that the chemicals were catastrophically bad for pollinators.

The inaccuracies stuck, the public picked a side, and the European Union-wide ban was put in place, despite a lack of scientific justification, and despite the foreseeable economic repercussions.

A German research group said in a study that the economic consequences of the ban could be severe: "if neonicotinoid seed treatments were no longer available in Europe, there would be a significant reduction of food production, dramatically altering the commodities trade balance," reported the Humboldt Forum for Food and Agriculture.

If the ban is left in place over a five-year period, it could cost the European Union up to $19 billion. Farmer income would decline by five percent, and at least 50,000 jobs would be lost, the group added.

The non-vanishing bee

Today, the European Union is considering lifting its ban on neonicotinoids, yet environmentalists are pressuring the U.S. Environmental Protection Agency to restrict the same chemicals for the same reason: to save bees.

The Obama administration announced a strategy in May to stem what it characterized as an unprecedented decline in the number of pollinators, particularly honeybees. Part of the plan includes speeding up EPA's scheduled review of neonicotinoids. The press hailed the strategy as a moment of redemption for threatened bee populations.

"After the sting of vanishing bees, White House pollinates protection plan," CNN reported, discussing the "effort to help the declining bee and butterfly populations."

"After years of devastation, the American honey bee finally has the White House's attention," reported *Quartz*, a business publication affiliated with *The Atlantic*. In a separate article, *Quartz* declared that "the world is finally trying to save the bees." Many other outlets welcomed the decision, including the *New York Times*, National Public Radio, and the *Wall Street Journal*, which reported that there has been a "surge in honeybee deaths."

As newsrooms celebrated the White House's announcement, few reporters asked whether there has been an actual decline in honeybees. That was a mistake.

"The whole 'mass death' thing is off," biologist and beekeeper Randy Oliver told the *Examiner*. "In the United States, the number of colonies is increasing. Simply look at the number of colonies available for almond pollination each year," he said. "The acreage of almonds is increasing each year, so the demand for colonies is increasing each year. And it's all across the world. African countries, Canada, many European countries are increasing their numbers" of colonies.

According to beekeeper and biomedical researcher Peter Borst writing in the *American Bee Journal*: "The number of managed bee hives in the world [has risen] from 50 million in 1960 to more than 80 million today. But this figure only reflects managed colonies, not wild colonies. It is hard to know the real number of 'unkept' honeybee colonies in the world." Africa alone has at least 310 million, he suggested.

Borst told the *Washington Examiner* that, "In most areas where honeybees are kept, the numbers are going up, not down."

He and Oliver cited several reasonable and non-shocking explanations for past fluctuations in bee numbers, including the drop-off a few decades ago in the number of recreational beekeepers.

"It's a cyclical thing. People lost interest in [beekeeping] in the '80s and '90s, especially when it got to be harder to take care of bees," Borst said. "Now there's a huge resurgence in beekeeping as a hobby, because people are reading about it in the papers and now they want to be part of the solution."

Bees and wasps have been disappearing in Britain for more than a century, *Smithsonian*'s Sarah Zielinski reported in December. "Changes in agricultural practices since the 19th century may be a major culprit in the pollinators' decline," she wrote.

The same issue of changing agricultural practices holds true in the United States, an important bit of context for which the Obama administration fails to account as it suggests that the bee population is collapsing.

In order to create the impression of a precipitous decline, the administration compares current hive numbers to those of the 1940s. It ignores the fact (noted by a University of Missouri economics professor, John Ikerd, in *Small Farm Today* magazine) that the number of farmers, many of whom kept bees, also declined since the '40s, as post-war agricultural practices trended toward larger farms.

Since the mid-'90s, when the supposedly harmful neonicotinoids hit the market, there has been no massive drop in the number of honey-producing hives.

Furthermore, recent statistics from the U.S. Department of Agriculture show there were 2.74 million honey-producing hives in the United States in 2014, an increase of 4 percent from 2013. Honeybee numbers in the United States are at a 20-year high, according to USDA statistics.

Another problem with claims of Beemageddon is that there's a big difference between fewer *bees* and fewer bee *colonies*. The European Academies Science Advisory Council said in a report analyzing Europe's pollinators that drawing any conclusions about trends from honeybee data "requires a differentiation between 'losses' and 'declines.' "

"Losses are the deaths of colonies which may occur in the temperate regions especially over winter," the report reads. "However, declines may occur both in the number of beekeepers or in the numbers of colonies maintained by each beekeeper. The latter are particularly heavily influenced by socioeconomic factors, by the price of honey, the presence or absence of subsidies, or the popularity of beekeeping as a hobby."

From point of view of Randy Oliver, the biologist and beekeeper, reporters don't appear interested in getting to the bottom of these nuanced and non-sexy details.

Oliver said a cable news correspondent once called him for information on reports that bees were dying off in record numbers. "I asked him if he wanted the facts or if he just wanted some printable sound bites to makes a sensational story," he said.

"The reporter pretty much said he wanted the second. The conversation ended after that."

Weird science: GMOs and activists

The same sloppiness regarding junk science has been seen in reporting on genetically modified organisms (GMOs). For example, French scientist Gilles-Eric Seralini claimed in 2012 that pesticide-treated, genetically-modified corn was causing cancer in lab rats. "His methodology was nonsense," said Greg Conko of the Competitive Enterprise Institute. "Seralini used a rodent variety that was specifically bred to develop tumors. The results were all over the map. He had to specifically cherry pick the one result from the study to highlight and put in the abstract."

Seralini's study was quickly retracted by the journal that published it. Undeterred, the French scientist, who also founded and works for an anti-GMO advocacy organization, had his work republished elsewhere, in the publication *Environmental Sciences Europe*.

Despite the many questions surrounding Seralini's work, and the fact that his study was retracted by the first journal that published it, the French scientist helped spread the notion that GMOs cause health problems. Corporations responded to people's concerns.

Last year, General Mills announced that it would drop GMO ingredients from its products. The decision was hailed as a step in the right direction, a signal that corporations were at long last becoming more health-conscious. The news media reported enthusiastically that Cheerios would no longer have GMO ingredients, and did little analysis regarding whether the ingredients are actually harmful.

But something may have changed. A year after the General Mills announcement, the Chipotle restaurant chain announced that it, too, would go GMO-free. This time, though, the announcement was met with far more derision.

"By Feeding Bogus GMO Fears, Chipotle Treats Customers Like Idiots," read one headline from *Reason* magazine. NPR followed up with an article headlined, "Why We Can't Take Chipotle's GMO Announcement All That Seriously," arguing that the popular restaurant was merely trying to pander to supposedly health-conscious customers. *Vox*, a website run by Ezra Klein, a liberal former *Washington Post* commentator, responded to Chipotle's announcement with a story headlined "Chipotle will stop serving GMO foods—despite zero evidence they're harmful to eat."

For experts such as Kevin Folta, a professor of horticulture at the University of Florida, Chipotle's anti-GMO stance represents the worst of the effect of junk science. "I've been involved in this for 30 years in the genetic engineering business," he said. "What I see is an increased visibility in a sort of tribal response to this. Chipotle is using fear. They're not telling you what they're using. They're telling you what's not in their product, and they're using it as a marketing weapon against other companies that have chosen to use perfectly safe ingredients."

The dramatic difference between the reactions to the General Mills/Cheerios announcement and the Chipotle announcement suggests that more Americans, including people in the media, are paying attention to the debate. This is a good thing, Bohannon said, adding that, "We definitely defer too much to scientific authority."

There's still a lot of bad information out there, said Professor Folta. "These technologies that have been safely implemented for almost 20 years now, without one single case of so much as a sniffle from genetically modified food. The safest, most tested products on the market are GMO."

State of the news media

Next to Congress, the least-trusted institutions in the United States include newspapers and news from television and the Internet. At least, that's what's reported by the Gallup poll.

Americans barely trust their own local news affiliates, let alone the word of a network anchor hundreds or thousands of miles away in New York City, according to Pew polling data. The media credibility gap is constantly widening, as public opinion of the press continually slips to new lows in recent years.

On the other hand, Americans have a generally favorable view of science. It should come as no surprise, then, that the press would latch on to science to help it re-establish trust with viewers, which may explain the rise of self-proclaimed "nerds" and "wonks" in media.

On NBC's *Meet the Press*, host Chuck Todd consults the "nerd screen." MSNBC's Melissa Harris-Perry likes to refer to her weekend show as "#nerdland," while that channel's Rachel Maddow calls the annual White House Correspondents' Dinner the "nerd prom." Ezra Klein, who used to head the *Washington Post*'s "wonkblog," now runs *Vox*, which styles itself as a website that explains the complexities of the world, one Excel spreadsheet at a time.

Headlines increasingly come with the promise of explaining any given topic with "science."

"Science explains why your brain wants you to go on Facebook for a break from work," reads one headline. Another reads, "Science explains how time spent outdoors colors your view of #thedress." Another: "Science finally explains why men exist."

Yet, as Bohannon concluded from his chocolate experiment, most reporters aren't interested in the finer points of scientific research. They want a sexy story, and if it can be based on a catch-all authority, even better. "There has been an undeniable decline of science journalism," he said, noting the small number of reporters who cover this beat. "Which is interesting as we're talking about the rise of the nerds. It's weird, because don't you think that now would be the time for science journalists?"

The consequences of junk science include more than just the spread of bad information or embarrassment for media outlets. Members of the public who absorb news reports disseminating junk science can suffer ill health effects, like Bohannon's mother. And the public as a whole can suffer negative consequences from the adoption of bad policies.

Gas on the fire

Experts on communications liken bits of information to viruses, spreading from one person to another, or genes spreading through a population. Such bits of information are called *memes*. (The term "meme" is often used to refer to a clever or amusing image, video, or piece of text that is copied and spread rapidly online, but that's actually just one type of meme.)

Memes can be good or bad or inconsequential, but memes based on junk science do significant harm. Once media outlets latch on to a tantalizing piece of junk research, it's practically impossible to stop the flow of false and misleading information.

"If junk science existed in a vacuum, it wouldn't be so harmful," says Junkscience.com founder Steve Milloy, who has followed the effect of bad science on the public and regulatory policy for more than 25 years. "The digital age has made it easier to spread junk science. The bad news is that it's really easy to get it out there. It's a real battle out there. It's always hard to turn the ship around."

In an interview, Milloy listed examples of bad data that fooled reporters, scientists, or both. He noted that he has helped debunk dietary scares about cholesterol ("We stopped eating eggs in the 70s!"), the idea that dietary fiber prevents colon cancer (debunked in 2013), and claims that electric power lines cause cancer. More recently, he debunked claims that vaccinations cause autism. The vaccination scare has been linked directly to a recent measles outbreak in California.

"I can't think of a single major environmental, dietary, or public health story in my career that has not been driven in some way by junk science," he said. "But we are still awash in junk science that affects our health or costs us money, peace of mind and our liberties."

Greg Conko of the Competitive Enterprise Institute said junk science is "much more prevalent today than it was 20 years ago. There are more media outlets, and there are more people putting out content."

Garbage science is quickly amplified and distributed far and wide by a media that can be uncritical in the spread of dubious and, sometimes, outright false information.

In a digital news age, when websites are fighting furiously for clicks and traffic, reporters are often required to operate under harsh deadlines, produce content quickly and move on to the next story. "We're perpetually seeing stories about 'X' will cure cancer or 'Y' will give you cancer," Conko said. "It's all junk science. But it's exciting news that sells newspapers and attracts eyes to television shows and the web." Reporters "will take media releases from journals and institutions and basically regurgitate them," said Milloy.

Long after a news outlet moves on to the next headline, misinformation lingers.

Scientific literature that's simply untrue

The junk science problem isn't just a problem of the news media. It's also a problem on the other side of the equation, in the science itself.

There is a crisis in how science is produced and verified: "something has gone fundamentally wrong with one of our greatest human creations," Dr. Richard Horton, editor-in-chief of the prestigious British medical journal *Lancet*, lamented this year. "Much of the scientific literature, perhaps half, may simply be untrue. Afflicted by studies with small sample sizes, tiny effects, invalid exploratory analyses and flagrant conflicts of interest, together with an obsession for pursuing fashionable trends of dubious importance, science has taken a turn towards darkness."

Horton reported on a symposium exploring the reproducibility and reliability of biomedical research. The conclusions were not encouraging. Horton quoted an attendee: "A lot of what is published is incorrect."

Top scientists at the National Institutes of Health reported similar findings last year in the journal *Nature*. "The checks and balances that once ensured scientific

fidelity have been hobbled. This has compromised the ability of today's researchers to reproduce others' findings," wrote NIH director Francis Collins and his principal deputy, Lawrence Tabak. It's easy, for example, for a determined researcher to subvert the all-important peer-review process, all while earning the coveted "peer-reviewed" stamp of approval.

"The big problems we have are predatory journals and journals with very soft editorial and review standards," said the aforementioned Professor Folta. Some of these will publish "just about anything."

If you doubt that, consider that in 2005, two computer scientists, David Mazieres and Eddie Kohler, tested the peer-review process by submitting a hoax study titled "Get Me Off Your [expletive] Mailing List." (The expletive is a common one starting with "f.")

The 10-page study consists almost entirely of that obscene title phrase repeated over and over again. The impressive-sounding *International Journal of Advanced Computer Technology* published their paper last year. (The science blog *i09* called *IJACT* a "predatory open-access journal.")

Prior to the chocolate hoax, John Bohannon posed as a researcher in 2013 and submitted a bogus work to 304 journals that pride themselves on the peer-review process. "An unusual move; but it was an unusual paper, concocted wholesale and stuffed with clangers in study design, analysis and interpretation of results. Receiving this dog's dinner from a fictitious researcher at a made-up university, 157 of the journals accepted it for publication," the newsmagazine *The Economist* reported that year.

Last year, the *Journal of Vibration and Control* retracted at least 60 papers after it was revealed that a researcher in Taiwan and others "had exploited peer review so that certain papers were sure to get a positive review for placement in the journal," as Hank Campbell, founder of the science-based website Science 2.0, wrote in a 2014 *Wall Street Journal* op-ed. An author of one of the now-pulled works wrote his own "glowing reviews"—under a false name, of course.

And here's a fact that may shake your faith in the vaunted process of "peer review":

Until 2010, the National Academy of Sciences* *allowed researchers to select those who would review their submissions*.

This loose policy allowed Professor Tyrone Hayes of the University of California, Berkeley, to choose friend and colleague Professor David Wake to review his work on his studies published in 2002 and 2010, said *Science 2.0*'s Hank Campbell. Hayes claimed to prove that a pesticide called atrazine was responsible for causing sex changes in frogs. If so, that suggested disturbing implications for humans.

Professor Wake hand-walked the work of his friend Professor Hayes around the peer-review process, Campbell said.

"There's no data. Hayes' work has never been replicated," Campbell told the *Washington Examiner*. "All there are are a couple of screenshots. But it was published in the National Academy of Sciences, so of course it's soon picked up by the *New York Times*, the *New Yorker*, and so on. The EPA is even told it must conduct an investigation because this product is supposedly harmful."

The Environmental Protection Agency launched multiple reviews of Hayes' work. Hayes refused to provide the EPA panels with his data in a form that they could access, and the Agency was unable in any review to replicate his findings.

Despite all the questions surrounding his work, Hayes' research boasts the "peer review" stamp of approval, and he is depicted in the news media as something of a heroic crusader—as one man fighting a conspiracy of corporations who are determined to bury the truth. The *New Yorker*, in a glowing profile of the scientist, reported that, "after Tyrone Hayes said that a chemical was harmful, its maker pursued him." The *New Yorker* profile makes no mention of allegations that Hayes' research was improperly hand-walked through the peer-review process.

Following the allegations by Campbell and others that Hayes had avoided proper scrutiny, the National Academy of Sciences adjusted its protocols to prevent potential conflicts of that type. Data are now required for all submissions.

Hayes, who did not respond to a request for comment, is just one example of what Horton calls the "endemicity of bad research behavior" afflicting science. In "their quest for telling a compelling story, scientists too often sculpt data to fit their preferred theory of the world," he wrote in *Lancet*.

As Folta noted, "Once something's published, people will cling to it and say, 'Well, it's published in a peer-reviewed journal.' This thwarts the entire scientific process."

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* *Editor's Note:* As we noted in the June 2014 *Green Watch*, NAS was created during the Lincoln administration to provide advice on science and, it was hoped, help solve the problems of a nation in the midst of the Civil War. Its most prominent founder was Louis Agassiz, famous for both real science (he was the first to scientifically propose the idea of an Ice Age) and bad science (he was a father of so-called "scientific racism," the scientific consensus that wrongly supported white supremacy). Today, there is no independent authority that protects the objectivity of NAS. Rather, current NAS members elect the new members, for life terms, a selection process that fosters the politicization of science and, often, the involvement of scientists in policy matters about which they know little. *–SJA*

Despite the troubling state of its system of checks and balances, science is regularly invoked as an absolute authority, and anyone who challenges the "research" is branded as backward. For example, President Obama treats with derision those members of Congress who resist his agenda on "climate change." He calls them Flat Earthers, a reference to the notion that, prior to the voyages of Columbus, people believed the earth was flat, and that Columbus was warned that he might sail off the edge.*

Today, one is portrayed as "anti-science" if one opposes or even questions the shutdown of coal-fired power plants, or comes out against a carbon tax, or stands in the way of other government actions that impede energy production. It doesn't matter if the position of the "deniers" is the one based in real science.

Increasingly, such attacks aren't limited to issues related to energy and the environment. If, based on the scientific data, a person comes to believe that unborn infants feel pain at 20 weeks of pregnancy, and if that person expresses that view publicly, he or she may be attacked as "anti-science" (as well as "anti-woman").

What is to be done?

"Junk science on GMOs and other topics like that are worse than just bad information," said Steve Milloy. "These campaigns are hurting underdeveloped countries that have only recently adopted these technologies." Kevin Folta explained the consequences in more dramatic terms, accusing activists and allegedly complicit researchers and reporters of practically having "blood on their hands."

"Negative public sentiment makes companies stop pursuing these technologies," he said. "The approval process for GM crops in Europe? They pulled the plug on it and they went back to old school methods of using radiation and chemicals on seeds, which is a much more crazy idea.

"We have solutions for real-world problems that exist today, and we can help thousands of people who die every day from malnourishment. But we're being hobbled by people who can't produce any proof of what they say," Folta said. "We should be welcoming these technologies. People have made so many barriers with all their pseudo-science-[baloney]."

Milloy and Folta said that, to fix the problem, the media, organized science, and the public must take practical steps. Independent organizations should be established to help ensure the transparency of all scientific research. No more in-house reviews in place of independent examination. No more asking friends to peer-review projects.

The scientific community should also address the issue of reproducibility. Science is rooted in the idea that research and experimentation can be reproduced, that another scientist or academic can follow the same path to the same result. Real science doesn't simply take people's word for it.

In the future, studies should require replication. No study or research paper should move forward unless a panel can reproduce its findings.

Conko of the Competitive Enterprise Institute stressed that it is the responsibility of editors in newsrooms to make sure that their reporters understand the topics discussed. "Journalists hold themselves up as being the people who are trying to bring truth to news consumers. And I would say they have an obligation, an ethical obligation, to be better at what they do," he said. "They owe their readers a duty to be more vigilant, to ask the right questions, to not fall into these biases of thinking that just because it's exciting, it's worth reporting on."

Bohannon—the chocolate hoaxster—has a solution that is a little simpler. "My approach is shaming," he said. "This is a total triage situation. There are so many ways that the media-researcher complex needs to be improved and I feel like right now we need to call attention to it."

As seen in the reaction to Chipotle's GMO announcement, there is hope. Bohannon recalled a surprise from his chocolate experiment. As news organizations were publishing reports based on his fake work, Bohannon noticed that the reports inspired lively discussions in the comments sections. Readers were processing the bad information and pointing out the flaws in the fake data.

"People are definitely engaged," he said, "and they're calling people on it."

T. Becket Adams is a staff correspondent for the Washington Examiner*, from which this article is adapted.*

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* *Editor's Note:* A great irony is that the story of Columbus and the Flat Earthers is rooted in a hoax, based on a fantasy story, spread by scientists attempting to denigrate people with whom they disagreed. The fact that the earth is more-or-less round has been common knowledge for thousands of years in most of the world and among all educated people. *–SJA*

GreenNotes

Ever wonder why **Europeans** are more likely than **Americans** to be Global Warming true believers? One reason is that, believe it or not, the amount of government indoctrination on the topic is actually greater in Europe than in the U.S. **Catherine Rampell** of the ***Washington Post*** wrote that, in a school she visited in **Berlin**, educators integrate "climate change" into "just about every class you can think of." Students learning English practice sentences like "If we don't do something about global warming, more polar ice will melt." Students in "an 11th-grade geology class dedicated entirely to sustainability" write poetry about *klimawandel* (climate change). "This summer **German** education ministers will issue guidelines for teaching sustainability in English [classes], French, Spanish, the visual arts, music, history, mathematics, biology, chemistry, physics and even phys-ed. And [according to a **UN** official] similar efforts are underway in developing economies such as the **Dominican Republic**, **South Africa**, **Vietnam**, **Kenya**, and **Mauritius**." **France**, too.

The ***Washington Examiner*** reports that the **Washington, D.C.**-based **Humane Society of the United States** (HSUS) is expanding lobbying operations in all 50 states and to 70 countries as it shifts focus to promoting a "humane economy." Said HSUS president **Wayne Pacelle**: "We are making enormous progress in the domains of animal welfare, as it relates to food and agriculture, entertainment and animal testing. It's time to step on the gas and drive even bigger changes throughout society, and that's exactly what we plan to do." **HumaneWatch.org**, a project of the **Center for Consumer Freedom**, accuses HSUS of "deceptive fundraising practices"—it raises money for local pet shelters, but spends most of that money lobbying for such causes as "animal rights." HSUS was founded by **Fred Myers**, who had been fired from the **American Newspaper Guild** for his **Communist** affiliation and served as public relations director or executive director of three **Soviet** front organizations.

Besides animal rights, HSUS crusades on the Global Warming issue. For example, it partnered with the **Worldwatch Institute** [see *Green Watch*, April 2012] to attack American farmers as responsible for warming, and the organization's environmental arm funneled at least $10.5 million to the **Bill, Hillary, and Chelsea Clinton Foundation**'s "climate change" campaign.

As the late journalist **M. Stanton Evans** famously remarked: Liberals don't care what you do, as long as it's compulsory. What matters to **the Left** is power—the power to control your life. The **Obama administration** is implementing what the *Washington Post* calls "a new near-zero tolerance ban of partially hydrogenated oils, the main source of trans fats. Food companies will be given three years to phase the ingredient out of their offerings." The government doesn't have the constitutional power to ban food that people voluntarily choose to eat, of course, but that won't stop the Obama **Food and Drug Administration**.

Trans fats make food longer-lasting (thus, cheaper) as well as better-tasting. But a major factor that caused Americans to consume lots of trans fats in recent decades was that they were depicted as more healthful than other oils. According to sociologist **David Schleifer**: "In the 1980s, responding to the connection that medical authorities made between saturated fats and heart disease, **CSPI** [the left-wing Center for Science in the Public Interest] and another activist organization, the **National Heart Savers Association** (NHSA), campaigned vigorously against corporations' use of saturated fats, endorsing trans fats as a healthy, or healthier, alternative. . . . Growers, oil suppliers, and academic and government scientists had been working since the early twentieth century to commercialize soybeans and develop the partial-hydrogenation process, and by the 1980s partially hydrogenated soybean oil was to some extent already in use. When activists targeted manufacturers for 'poisoning America . . . by using saturated fats,' nearly all targeted firms responded by replacing saturated fats with trans fats. . . . [I]n part, activists succeeded by framing the replacement of saturated fats as a rational course of action based on a scientific fact—namely, the association between saturated fats and heart disease." Oops.

Meanwhile, a new study published in ***BMJ*** (the British Medical Journal) indicates that—because people on low-fat diets typically replace fats with "empty calories" —cutting out saturated fats doesn't reduce heart disease. Oops.

And we were told for half a century that dietary cholesterol is bad for you. Now the Food and Drug Administration acknowledges that it "is not considered a nutrient of concern for overconsumption." What would we do without experts telling us how to live?

Capital Research Center's Haller interns Ana Almeida, James Cornelison, Timothy Freeman, and Mark R. Taylor assisted in this report.